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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/034,279

12/28/2001

John Durbin Husher

2209P

9758

29141

7590

05/14/2004

SAWYER LAW GROUP LLP

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EXAMINER

NHU, DAVID

ART UNIT

PAPER NUMBER

2818

DATE MAILED: 05/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/034,279	HUSHER, JOHN DURBIN	
	Examiner	Art Unit	
	David Nhu	2818	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

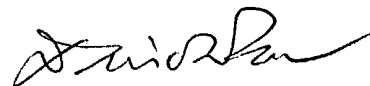
Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.



Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTIONS

Election/Restrictions

1. *Applicant's election of Group II (Claims 10-21) in page No.8 is acknowledge.*

Claims 10-21 are remained for examination. Claims 1-9 are withdrawn from consideration.

See 37CFR 1.142 (b) and MPEP & 821.0.

Claim Rejections - 35 USC § 112

2. *Claims 10, 16 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.*

It appears that the original specification does not have support for:

“ the at least one metal being of sufficient thickness to carry a high current”, which were not described/supported in the specifications.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 10-21 are rejected under U.S.C 103(a) as being unpatentable over Yamada (6,008,127) in view of Dausch et al (6,359,374 B1).

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Regarding claim 10, 16, Yamada, figures 1-38, (figures 33, 35, 36, 37, col. 8, lines 52-67, col. 9, lines 1-67), disclose a semiconductor device comprising: a semiconductor substrate 201 including a plurality of device structures (see figure 35) thereon; and an interconnect 235 on the semiconductor substrate, the interconnect comprising at least one slot 235 (see figure 33) provided in the semiconductor substrate and at least one metal 235 (aluminum) within the slot, wherein the at least one slot is oxidized everywhere (see col. 8, lines 52-67) except at the bottom of the slot where the interconnect forms a ground 225 (see col. col. 9, lines 58-65). Yamada fails to teach the at least one metal being of sufficient thickness to carry a high current.

However, Dausch, figures 1-4, and related text on col. 1-10, (col. 5, lines 14-24, col. 6, lines 24-58) teach at least one metal being of sufficient thickness to carry a high current.

Regarding to claims 11-21, see Yamada, col. 1-14, and Dausch, col. 1-10.

It would have been obvious to one having ordinary skill in the art at the time of the present invention to apply the teachings of Dausch into the method of Yamada as both are related to the same subject matter of providing a high voltage semiconductor device including an interconnection layer having at least one metal within a slot. The conductive metal with sufficient thickness to carry a high current.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Yamada'031 is cited as of interest.
5. A shortened statutory period for response to this action is set to expired 3 (three) months and 0 (zero) day from the date of this letter. Failure to respond within the period for response

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will cause the application to become abandoned(see 710.02 (b)).

6. Any inquiry concerning this communication on earlier communications from the examiner should be directed to David Nhu, (571)272-1792. The examiner can normally be reached on Monday-Friday from 7:30 AM to 5:00 PM. The examiner's supervisor, David Nelms can be reached on (571)272-1787.

The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306..

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

David Nhu

DZ

May 11, 2004

